



Safer Sites: A Practical Guide to COSHH, Noise & Safety Culture

Expert-led guidance to help construction businesses identify health risks, select effective controls and build a stronger safety culture.

COSHH Hazardous substances & construction dust	NOISE Assessment, exposure & controls	SAFETY CULTURE Leadership, engagement & learning
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Prepared by Lloyd Health & Safety | Guidance reviewed against current HSE information, August 2026

Practical. Proportionate. Professional.

Construction health & safety guidance for UK businesses and contractors

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Why these three areas matter

Construction safety is not only about preventing immediate accidents. Long-term health risks such as dust, chemicals and excessive noise can cause permanent harm, while a weak safety culture can allow hazards, shortcuts and near misses to become normalised.

The strongest systems combine good risk assessment, effective controls, visible leadership and worker involvement. This guide brings those elements together in a practical format that can be used by small contractors, site managers, supervisors and project teams.

1. Control health risks

Understand what workers are exposed to, how exposure occurs, who may be affected and what controls are needed before work starts.

2. Control noise at source

Do not default to ear defenders. Choose quieter methods and equipment, isolate noisy work and reduce duration or proximity before relying on PPE.

3. Build the right culture

Standards become sustainable when leaders are visible, workers are listened to and teams are encouraged to report concerns and stop unsafe work.

4. Review what actually happens

Audits, supervision, worker feedback, near misses, health surveillance and exposure monitoring should feed back into better planning and controls.

Key UK legal framework

Legislation / guidance	Why it matters
Health and Safety at Work etc. Act 1974	Sets the overarching duty to protect employees and others, so far as is reasonably practicable.
Management of Health and Safety at Work Regulations 1999	Requires suitable and sufficient risk assessment and effective health and safety arrangements.
COSHH Regulations 2002 (as amended)	Requires exposure to substances hazardous to health to be adequately controlled.
Control of Noise at Work Regulations 2005	Requires employers to assess noise risk, reduce exposure, provide information/training and health surveillance where required.
Construction (Design and Management) Regulations 2015	Requires construction work to be planned, managed, monitored and coordinated so risks are properly controlled.

Important

This guide is general guidance, not a substitute for a site-specific risk assessment, exposure assessment or competent professional advice. The control measures required will depend on the task, materials, people, duration and environment.

1. COSHH: control the exposure, not just the product

COSHH applies to many substances used or created by work. On construction sites, the highest risks are often generated by the task itself - for example silica dust from cutting concrete, wood dust from sanding, welding fume or solvent vapours.

Safety Data Sheets are only the starting point

A Safety Data Sheet provides hazard information that helps you carry out a COSHH assessment. It is not a COSHH assessment on its own. Your assessment must consider the actual task, exposure route, duration, quantity, environment and controls.

Common construction exposures

Exposure	Typical sources	Potential harm
Respirable crystalline silica (RCS)	Cutting, chasing, grinding or drilling concrete, block, mortar and stone	Serious lung disease, including silicosis and increased cancer risk
Cement and wet concrete	Mixing, pouring, handling and cleaning	Dermatitis, chemical burns and sensitisation
Wood dust	Sawing, sanding, routing and machining	Respiratory irritation, asthma; some wood dusts are carcinogenic
Solvents, paints and resins	Coatings, adhesives, cleaners, sealants and two-pack products	Skin/eye effects, dizziness, respiratory harm and sensitisation
Fumes and gases	Welding, cutting, engines, generators and confined/enclosed areas	Respiratory harm, systemic effects or asphyxiation depending on substance

A practical COSHH assessment - 8 steps

1. Identify: list products used and harmful substances generated by the work.
2. Understand the hazard: use labels, SDS, HSE guidance and relevant Workplace Exposure Limits where applicable.
3. Identify who may be exposed: include operatives, nearby trades, cleaners, maintenance teams, visitors and members of the public where relevant.
4. Consider exposure: inhalation, skin contact, eye contact and accidental ingestion; include frequency, duration and quantity.
5. Prevent or substitute: remove the substance or process where reasonably practicable, or use a safer material/method.
6. Control at source: enclosure, on-tool extraction, LEV, wet methods, segregation and good work practices before relying on PPE/RPE.
7. Inform and train: workers must understand the hazard, controls, emergency arrangements and correct use of PPE/RPE.
8. Review: check controls are used and effective, maintain equipment and review after changes, concerns, incidents or evidence of ill health.

COSHH controls: what good looks like on site

The most reliable control is one that prevents or reduces exposure without relying on perfect human behaviour every time. Engineering controls and good task design should therefore come before PPE wherever reasonably practicable.

Priority	Examples on construction sites
Eliminate / redesign	Avoid cutting where possible; order pre-cut materials; design out chasing; use pre-fabrication.
Substitute	Select lower-hazard products or less dusty processes where suitable.
Engineering controls	On-tool extraction, LEV, wet cutting, enclosure, closed transfer, physical segregation.
Administrative controls	Restricted access, task sequencing, storage rules, controlled cleaning methods, supervision and signage.
PPE / RPE	Use suitable gloves, eye protection, protective clothing and correctly selected RPE as part of the overall control strategy.

Construction dust - a high-priority example

HSE guidance for high-dust tasks such as concrete grinding and chasing emphasises on-tool extraction and suitable RPE. Tight-fitting masks need to fit the individual wearer; face-fit testing is needed, and facial hair in the sealing area prevents an effective seal. For some longer-duration tasks, powered RPE may be more appropriate.

Do

Use the correct extraction class and airflow; keep hose connections secure; use dust-free cleaning methods; store chemicals correctly; label decanted containers; provide spill arrangements.

Do not

Dry sweep silica-containing debris; assume a dust mask alone controls the risk; mix incompatible substances; use damaged LEV/RPE; rely solely on an SDS or generic assessment.

COSHH site check

- Have all hazardous substances and process-generated contaminants been identified?
- Is there a task-specific COSHH assessment, not just an SDS folder?
- Are controls selected using the hierarchy and verified on site?
- Is RPE suitable, face-fit tested where tight-fitting, compatible with other PPE and maintained?
- Are storage, labelling, spill response, waste and emergency arrangements defined?
- Are workers trained and are health surveillance / exposure monitoring needs considered?
- Are LEV and extraction systems maintained, examined and tested at the required intervals?

Scope note: Asbestos, lead and radioactive substances have their own specific legal regimes and should not be treated as ordinary COSHH substances.

2. Noise: assess exposure before hearing is damaged

Noise-induced hearing loss is permanent but preventable. Construction work can combine several noisy activities at once, so assessment must consider the actual task, duration, location and people exposed - not just a single sound level on a tool data sheet.

Noise action and limit values

Level	Daily / weekly exposure	Peak sound pressure	What it means
Lower action value	80 dB(A)	135 dB(C)	Assess risk; provide information/training; make hearing protection available where appropriate.
Upper action value	85 dB(A)	137 dB(C)	Establish and implement a programme of technical/organisational controls; designate hearing protection zones where required and ensure protection is used.
Exposure limit value	87 dB(A)	140 dB(C)	Must not be exceeded.

Simple warning signs

HSE notes you will probably need to take action where people have to raise their voices at about 2 metres apart for part of the day, use noisy powered tools or machinery for more than around half an hour a day, or are exposed to regular impact / explosive noise.

A practical noise assessment - 7 steps

- 1. Identify noisy tasks: breakers, saws, grinders, drills, compactors, plant, generators and simultaneous activities.
- 2. Identify people at risk: operators and everyone working nearby, including other contractors.
- 3. Estimate exposure: consider sound level, task duration, number of cycles, shift pattern and enclosed/reflective environments.
- 4. Use reliable data: HSE data, manufacturer information and measurements where needed. Complex or variable sites may require competent measurement.
- 5. Compare against action values: decide what legal and practical controls are triggered.
- 6. Control: eliminate or reduce noise at source first; then isolate, distance, schedule, restrict access and use hearing protection where necessary.
- 7. Review: supervise, maintain equipment, update assessments when tasks change and provide health surveillance where there is a risk to hearing.

Noise controls: move beyond ear defenders

Hearing protection is important, but it should not be the first or only control. Good noise management reduces the sound reaching people in the first place.

Quieter methods

Use block splitters rather than cut-off saws where suitable; consider crushing/bursting rather than percussive breaking; design tasks to avoid unnecessary noisy processes.

Quieter equipment

Specify low-noise plant and tools at purchase/hire stage. Maintain guards, covers, silencers, bearings and exhaust systems.

Separate people from noise

Use cabins, remote controls, barriers, enclosures, exclusion zones and distance. Position fixed noisy plant away from work areas and walkways.

Manage time and sequence

Reduce unnecessary running time, coordinate simultaneous noisy tasks and limit duration as a supporting measure - not a substitute for engineering controls.

Hearing protection: get the details right

- Choose protection suitable for the actual noise exposure and task - avoid overprotection that prevents workers hearing alarms, instructions or approaching plant.
- Ensure protectors are compatible with hard hats, eye protection and other PPE.
- Maintain and replace damaged seals, cushions or plugs and provide hygienic storage.
- Clearly define hearing protection zones where required and supervise correct use.
- Where workers are frequently exposed above the upper action value, or otherwise at risk, arrange appropriate hearing health surveillance.

Example: disc cutting concrete

Weak approach	Stronger approach
Issue ear defenders and allow cutting anywhere on site.	Check whether cutting can be avoided or reduced; select lower-noise equipment; use a defined cutting area; position it away from other workers; combine dust and noise controls; limit exposure time; provide suitable hearing protection and brief the team.

Practical point

Noise and dust controls should be planned together. A change intended to reduce one risk should not create another - for example, moving a cutting task into an enclosed area can increase both noise reflection and airborne dust if controls are poor.

3. Site safety culture: make the safe way the normal way

A safety culture is shaped by what leaders pay attention to, what supervisors accept, what workers feel able to challenge and what happens after someone reports a problem. Policies matter - but daily behaviours show the workforce what the organisation truly values.

HSE leadership principles emphasise visible leadership, effective communication, worker involvement, competent advice and regular monitoring/review. HSE also highlights that worker involvement can improve risk control and create a more positive health and safety climate.

Seven behaviours that build a stronger culture

Visible leadership

Managers and supervisors spend time where the work happens, ask good questions and act on what they see.

Permission to stop

Workers know they can pause work where conditions change or controls are missing - without fear of blame for raising a genuine concern.

Good planning

RAMS, briefings and permits reflect the real task and sequence, rather than becoming paperwork completed after decisions have already been made.

Open reporting

Near misses, unsafe conditions, health concerns and quality issues are reported early and used as learning opportunities.

Worker involvement

People doing the task are involved in deciding how to control it. Their practical knowledge is treated as a resource.

Consistent standards

Site rules apply to managers, contractors, visitors and operatives alike. Schedule pressure does not silently create a second standard.

Learning and review

Actions are tracked to closure, lessons are shared and recurring issues are escalated rather than repeatedly accepted.

Turn culture into a management system

A positive culture becomes sustainable when it is supported by a simple management cycle. HSE's HSG65 uses the Plan - Do - Check - Act approach to integrate health and safety into normal business management.

PLAN	DO	CHECK	ACT
Set standards. Identify risks. Define responsibilities. Plan resources, competence and controls.	Implement controls. Brief workers. Supervise work. Maintain plant, extraction and PPE/RPE.	Inspect, audit and monitor. Listen to workers. Review incidents, exposure data and health surveillance.	Correct weaknesses. Close actions. Share learning. Update assessments, training and arrangements.

One-page site leadership checklist

- Planning: Are today's highest-risk tasks identified and are the controls practical?
- COSHH: Are hazardous substances and task-generated dust/fume properly assessed and controlled?
- Noise: Are noisy tasks assessed and controlled at source before relying on hearing protection?
- Interfaces: Could one contractor's work expose another trade or the public?
- Change: Have conditions, design, access, sequence, plant or materials changed since the RAMS were prepared?
- Competence: Do the people doing the work have the skills, knowledge, training and supervision needed?
- Briefing: Can workers explain the key hazards and controls in their own words?
- Challenge: Would a worker feel comfortable stopping work or challenging a manager?
- Housekeeping: Are access routes, waste, dust, storage and work areas being actively controlled?
- Learning: Are near misses, defects and repeated observations being converted into actions and improvements?
- Close-out: Does every significant finding have an owner, target date and evidence of completion?

"If the paperwork says one thing and the site is doing another, the site condition is the truth you need to manage."

Further reading & competent support

The following official sources underpin the legal and practical guidance in this document. Always check current HSE and [legislation.gov.uk](https://www.legislation.gov.uk) information for updates relevant to your work.

HSE - COSHH basics and COSHH risk assessment

<https://www.hse.gov.uk/coshh/>

HSE - Principles of good control practice

<https://www.hse.gov.uk/coshh/detail/goodpractice.htm>

HSE - Safety Data Sheets

<https://www.hse.gov.uk/chemical-classification/labelling-packaging/safety-data-sheets.htm>

HSE - Construction dust / silica task guidance

<https://www.hse.gov.uk/construction/healthrisks/hazardous-substances/>

HSE - Noise at work and construction noise

<https://www.hse.gov.uk/noise/>

HSE - Managing for health and safety (HSG65)

<https://www.hse.gov.uk/pubns/books/hsg65.htm>

HSE - Leadership of health and safety at work

<https://www.hse.gov.uk/leadership/>

HSE - Consulting and involving workers

<https://www.hse.gov.uk/involvement/>

HSE - CDM 2015 guidance (L153)

<https://www.hse.gov.uk/pubns/books/l153.htm>

Legislation.gov.uk - UK health and safety legislation

<https://www.legislation.gov.uk/>

When to seek competent support

Consider specialist advice where exposure is uncertain, controls are complex, monitoring or health surveillance may be required, multiple contractors create significant interfaces, or your business needs independent assurance that site arrangements and documentation are suitable and proportionate.

Need practical health & safety support?

Lloyd Health & Safety supports construction businesses with site audits, RAMS, COSHH and noise assessments, CDM support, policies and practical compliance guidance.

lloydhs.co.uk

Disclaimer: This publication provides general information only. It does not constitute legal advice, a site-specific risk assessment or a substitute for competent occupational hygiene, health and safety or occupational health input where required. Dutyholders remain responsible for identifying and controlling the risks arising from their work.

Guidance prepared August 2026.